Growing WILD

Winter 2001

Utah's Project WILD Newsletter

Utah's Wonderful Wild Canids

Nothing more truly epitomizes the wildness of the West than the high-pitched quavering howl of a lone coyote echoing between canyon walls at the break of dawn. Coyotes, along with foxes, wolves, jackals, dingos, dholes (Asian red dogs), various other wild dogs and "man's best friend," the domestic dog, compose the family Canidae. *Canis* is the Latin word for "dog."

"Ki-yoo-oo-oo-oo-ooo-oo!
Speak now. O coyote, rumped upon the knoll!
Into the bowl of desert night--
Clinking and cool with stars--oh, roll
The melancholy of your soul. ..."

-- Colloquy with a Coyote --
Lew Sarett, 1941

Canids are the oldest and most widely distributed of living carnivores. Originating in North America over 50 million years ago, they adapted readily to a variety of climates and habitats, spreading to every continent except Antarctica and evolving into many diverse and unique species. In North America today, seven species, the red and gray wolves, the coyote and four species of foxes roam across the landscape in search of prey.

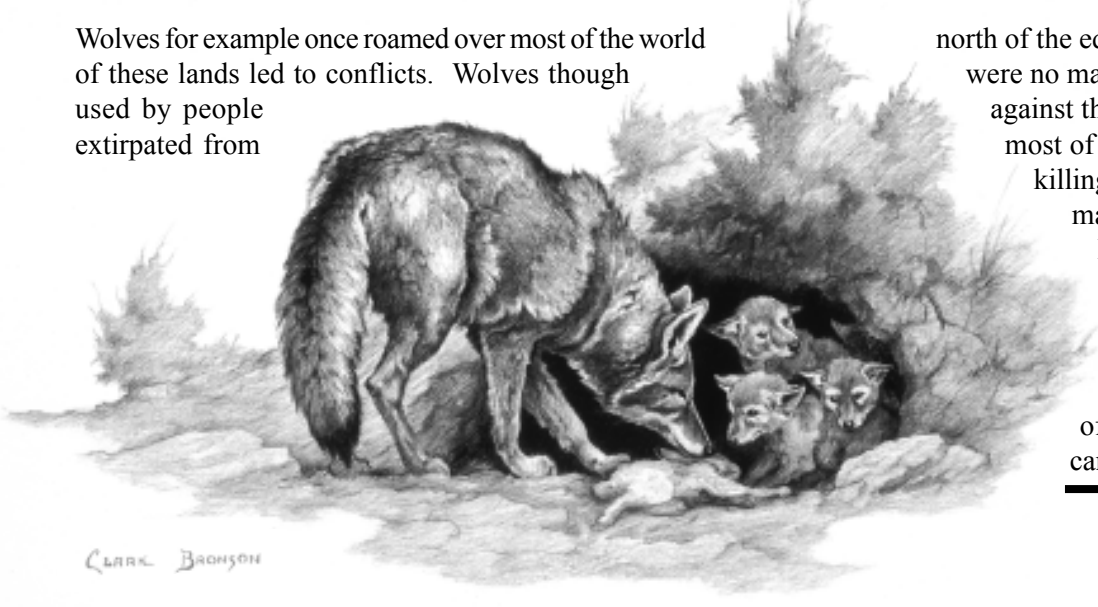
Canids are clearly well adapted for fast pursuit of prey. Their lithe bodies, powerful muscles, large lungs and light skeletons with elongated and semi-rigid limbs allow for great endurance and speed. They are digitigrade, meaning they actually walk and run on their toes, which are specially designed as part of the foot to withstand the shock of impact during running and provide support for traveling long distances. Tracks, left as they pass, show their distinctive paws, each with four toes and thick, hefty non-retractable claws that grip the earth as they run.

Forty-two teeth make up the impressive set of dental gear canids employ to capture and consume their prey. Most noticeable of these teeth are the four long, pointed canines that protrude from the corners of their slender muzzle. These canines are positioned in the jaw to lock firmly together when the mouth is closed, keeping captured quarry from getting away.

Wild canids are noted for their opportunistic and adaptable behaviors. This is especially reflected in the flexibility of their various social organizations, which range between living in large packs to leading a solitary existence. Hunting strategies, linked to types and sizes of prey, greatly influence differences in social structure between species and also within species. In general, pack life tends to be more suited for the larger canids such as wolves which hunt larger prey, whereas smaller canids such as foxes tend to be more solitary in nature. Within packs, strict social hierarchies are maintained through vocal, visual and olfactory means of communication.

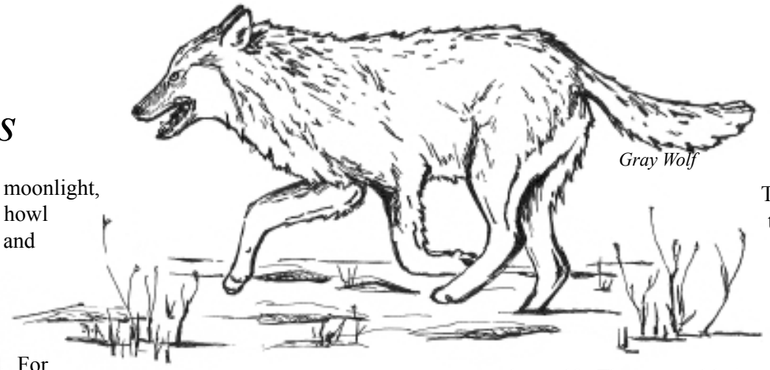
Regardless of size, all canids display many desirable and versatile traits, which probably led to their being first domesticated sometime about 12,000 to 15,000 years ago. Today, people breed and keep more than 400 different kinds of domestic dogs, all of which are believed to be descended from wolves. Ironically, many people love and admire domesticated dogs, while many wild canids suffer continual persecution and struggle to survive.

Wolves for example once roamed over most of the world north of the equator. Over time, human occupation of these lands led to conflicts. Wolves though were no match for the rifles, traps and poisons used by people against them. Today wolves have been extirpated from most of their former range. Besides direct killing, loss of habitat seriously threatens many species of wild canines as well. Fortunately for many species, though, it may not be too late. All it will take is a little tolerance, a better understanding of the role of predators in ecosystems, and preservation of some wild places where wild canids can live and hunt for their natural prey.



Read on to learn about Utah's Wonderful Wild Canids!

Wild Canid
Cast of Characters



Gray Wolf

Gray Wolf - *Canis lupus*

A fierce cold follows a late winter's storm. Heavy snow, sparkling white under the moonlight, blankets the forest. All is still, as if life has taken a pause — until a lonely, primeval howl hauntingly pierces the twilight silence. The first eerie howl is followed by another, and then another — the spirited chorus of a wolf pack on the prowl.

Suddenly out of the shadows they stream, one after the other, like mysterious apparitions, gliding through the deep snow. Having picked up the scent of prey far upwind, they set off in single file, seven wolves in all, with the strongest in the lead. For over a mile, they trot without pause until a small clearing is reached. At its edge stands a cow moose and her calf. The attack begins. The cow, spinning and kicking with each assault sends wolf after wolf into retreat. The frightened calf bolts off into the forest. The wolves swiftly pursue, and the calf goes down, the white glistening snow soon turning to red.

The wolf: to some, the consummate predator of the north, evolving over hundreds of thousands of years, side by side with their large ungulate prey, filling an essential role in the web of life. The wolf: to others, an evil, savage blood-thirsty killer with piercing green eyes terrorizing the night. No other animal seems to stir up such strong human emotions. Respecting and admiring its role in nature, many Native American cultures attributed an array of powers and miracles to the wolf, from the creation of tribes to healing powers. The wolf often played an important role in the spiritual and ceremonial life of the tribe. European settlers though brought with them a legacy of hatred and fear dating back for centuries. Mythology, legends and fables such a those of Aesop and the Brothers Grimm fueled such fears, lending wolves to intense suffering and persecution over the years.

Reflections of negative feelings towards wolves abound in our lexicon of today; hidden treachery is "a wolf in sheep's clothing"; one is in dire straits when a "wolf is at the door"; if you eat your meal in gulps, you are said to be "wolfing it down"; and if you "throw someone to the wolves," you have done that person in.

The gray wolf was once the most widespread mammal on the earth, with large populations on every continent exeept Africa. When Europeans arrived in the New World, more than 250,000 wolves existed in North America, ranging almost everywhere, from Alaska and the northern-most reaches of Canada, south into Mexico. In 1630 though, just ten years after the Mayflower landed at Plymouth Rock, the Massachusets Bay Colony began offering a bounty for every wolf killed.

As settlers poured into the west, wolves and their natural prey became squeezed onto less and less land and livestock often became easy wolf prey. As a result, control of the wolf became an all out war. By the 1930s massive govern-ment-sanctioned campaigns to exterminate the wolf in the lower 48 states had nearly led to their demise. Bounty programs for wolves still lasted until as late as 1965.

For wolves, the turning of the tide came with the passage of the Endangered Species Act of 1973. Current wolf populations in the lower 48 include about 3,300 wolves occuring naturally in the Great Lakes area, mainly in Minne-sota, Michigan and Wisconsin; about 300 from reintroduction efforts in the northern Rocky Mountains of Montana, Idaho and Wyoming; and about 25 from a recent reintroduction in the region of the Apache and Gila National Forests in Arizona and New Mexico. In Alaska, wolves number between 7,000 to 10,000, and in Canada, they thrive in about 90 percent of their original range.

The gray wolf is one of two species of wolf native to North America. Non-extinct subspecies of the gray wolf currently recognized include the arctic or tundra wolf which inhabits Alaska and the Northwest Territories; the timber wolf which lives in eastern Canada and parts of the northern United States; the Northern Rocky Mountain wolf, reestablished in Idaho and Yellowstone National Park; and the Mexican wolf (also called *lobo*) of Mexico and the southwestern United States. The other wolf species, the smaller red wolf, *Canus rufus*, was historically found in the southeastern United States. Extirpated from the wild, a small number (about 90) of captive-bred red wolves roam within refuges in northern North Carolina.

The gray wolf is the largest wild member of the Canidae, though not as enormous as in our imaginations based on notions of the "big bad wolf." The average mature wolf of North America stands about 30 inches at the shoulder and

measures about five to six feet long from the tip of its nose to the end of its tail. A male weighs between 75 and 125 pounds. Females weigh about 15 to 20 percent less.

The fur, or pelage, of "gray" wolves is actually a blend of colors including gray, white, tan, buff and red. A typical gray wolf may have a grizzled gray head and back that fades to a creamy tan on the belly and legs. Coloration can vary greatly though from inky black to pure white, a color common in the snowy lands of the far north. Siblings from the same litter can vary in color from black to white, but most, true to their name, are gray. The wolf's fur is made up of two coats. On top, three "capes" of water-repelling guard hairs up to five inches long layer the neck, shoulders and loins of the wolf. These guard hair capes direct rain off the coat so it does not penetrate the dense second layer of downy underfur below. This dual coat is so effective at keeping the wolf dry and warm that snow does not melt on its fur.

In the world of wolves, the pack is the vital social unit. Wolves usually live and hunt in packs of four to seven animals. The pack is actually a family group consisting of an *alpha* (dominant) pair, their pups, subadults from the litter of the previous year and sometimes older siblings as well. Wolf packs are highly organized and tightly knit. A complex dominance heirarchy with each member of the pack ranked according to status exists to maintain order. The *alpha* male and female are in charge, leading the pack in hunting, choosing den sites and establishing and defending the pack's territory.

Wolves communicate through facial expressions and body postures, scent-marking and a variety of vocalizations. The *alpha* male, for example, visibly displays his position by walking tall with his tail held out straight or arched high over his back. In contrast, a lower ranking pack member carries its tail low between its legs and when approached by a more dominant wolf may roll on its back in a display of submissiveness.

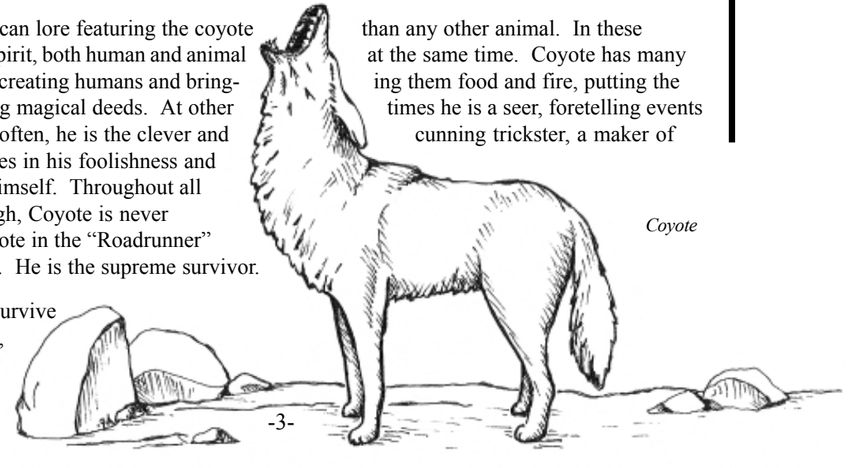
In addition to howling, wolves also growl, bark and whimper. Howling alone can mean many things such as a greet-ing, a call to gather the pack for hunting, or a warning to other wolves to stay away from their territory. The howl of a wolf can be heard up to six miles away. Pups begin to howl as young as one month of age.

Wolves have an extremely keen sense of smell estimated to be at least a hundred times more sensitive than that of humans. They can to identify other wolves and track prey through scent. Wolves also demark their territories by depositing scent marks. Scent provides a wealth of information such as the age of the scent and condition of the wolf that left the scent. To get a glimpse into the amazing capacities and complicated uses of scent in the realm of the wolf just observe your family dog out on a walk some time.

Utah at one time had a distinct race or subspecies of gray wolf (*Canis lupus youngi*) which is now extinct. Although wolves no longer reside in Utah, someday they again may. Some biologists are predicting that wolves will disperse naturally south into Utah from Yellowstone or the River of No Return Wilderness in Idaho within the next ten years. Some people would like to see them here sooner, hoping for reintroductions into the high Uintas, probably the only area in Utah large and isolated enough to support a pack of free-roaming wolves. Then, maybe someday, wolves will hunt for moose in Utah once again.

Coyote - *Canis latrans*

There are more stories in Native American lore featuring the coyote than any other animal. In these legends, "Coyote" is a special being, a spirit, both human and animal at the same time. Coyote has many faces. Sometimes he is a cultural hero, creating humans and bring-ing them food and fire, putting the sun and moon in the sky and performing magical deeds. At other times he is a seer, foretelling events of the future, both good and bad. And often, he is the clever and cunning trickster, a maker of mischief and a scoundrel who sometimes in his foolishness and arrogant vanity ends up being tricked himself. Throughout all his adventures and misadventures though, Coyote is never destroyed. He seems, like the wily coyote in the "Roadrunner" cartoon, to cheat death again and again. He is the supreme survivor.



Coyote

In real life, the ability of the coyote to survive is legendary as well. Like grizzly bears,

mountain lions and wolves, coyotes too have been victims of intensive anti-predator campaigns, intended to eradicate them. Coyotes though have managed to survive. In part, because of their intelligence and extreme adaptability — and despite being poisoned, shot, trapped, gassed and dug from their dens by the millions, coyotes have remained a western fixture, even expanding their range and increasing greatly in number.

Coyotes range coast to coast and from Alaska to Costa Rica, within all habitats from grasslands to alpine tundra and, even large cities. Ironically, changes wrought by humans encouraged the expansion of the coyote's range. For example, clearing of forests created additional suitable for coyotes and elimination of the red wolf allowed coyotes to spread their range eastward.

True to their trickster reputations, coyotes are also able to employ physiological and behavioral means to counteract threats to their existence. Known by biologists as "density dependent reproduction," when coyote populations are lowered, females produce larger litters and more females reproduce. And instead of being pushed out by expanding human populations, coyotes learn to exploit what human settlement offers. They eat roadkill, take livestock (mainly sheep), poultry and sometimes pets, and feast on watermelons. They den under abandoned structures, travel though storm drains and follow farm machinery to catch rodents that are flushed out. Being highly intelligent, coyotes also learn to avoid traps and poisoned baits, and are rarely captured again once having escaped. Those that evade capture or slaughter are typically the toughest, strongest and smartest. Thus through selection, the cleverness, speed and wariness of coyotes has over time, been inadvertently enhanced by the actions of those seeking to eliminate them. It seems that the coyote has managed to survive despite us — and to some, to spite us.

Ask almost anyone what trait comes to mind when you say "coyote" and usually, they will mention its howl. The coyote has truly earned its nickname, "song dog." Its repertoire includes its familiar yip-yip-yipping barks and an amazing chorus of whines, howls and wails that seem to rise all the way to the stars and beyond. The coyote's name is an adaptation of the word *coytl,* the Aztec name for the animal, and its scientific name *Canis latrans*, literally means "barking dog." Resembling small wolves, in the early 1800s, many people called coyotes "prairie wolves."

A coyote's coat is a blend of tans, browns and grays with a reddish tint washing into a buff along the belly, lower legs, muzzle and ears. About one-third the size of a wolf, they weigh in at about 20 to 35 pounds (males are slightly heavier than females). They stand about two feet tall on long slender legs and measure about four feet from the tip of their shiny black nose to the end of their black-tipped bushy tail. They have sharp yellow eyes that highlight a long narrow snout and furry upright ears that point to the sky.

Coyotes hide their dens in a wide variety places including brush-covered slopes, steep banks, rock ledges, thickets and hollow logs. Sometimes dens of other animals, such as badgers, or natural holes are used. During January and February pairs form for the breeding season. Pairs are monogamous and may remain together for several years, perhaps even for life. They may use the same den year after year to raise their young.

In March or April, after a gestation period of just over two months, one to ten furry, brown pups (the usual number is five or six) are born. They are born blind and helpless, but grow rapidly and begin eating solid food at about three to four weeks of age. The male, as devoted a parent as the female, helps in the upbringing of the young by bringing food to the den. This food is carried in his stomach and regurgitated for the pups. By July, the dens are generally abandoned, but the growing pups remain with their parents until late fall when they begin to disperse to find territories of their own. Although life is especially hard during the first year (less than half of the young make it to adulthood), the coyote is definitely a tough little survivor.

Red Fox - *Vulpes vulpes*

Red Fox

It moved slowly across the dim lit snow of dusk, wandering in an erratic path, nose riveted to the ground, sniffing, engrossed in its business. Then, it stopped, pricked its triangular ears forward and stared intently at a spot on the surface of the snow, head cocked one way then the other. It had picked up the faint sound and stirrings of a tiny meadow vole scurrying below the snow. It stepped forward in slow motion, as if on tiptoe, then froze, one paw out in front. Suddenly, it leapt high into the air and dropped down with its forepaws perfectly together pinning its hapless victim to the ground. A poke of its

pointy muzzle through the deep snow, a quick bite and the red fox swallowed down the vole. Voles compose a large part of the red fox's diet. Omnivores, they also eat a variety of small mammals such as deer mice, rabbits, and ground squirrels, small amphibians, carrion, ground nesting birds and their eggs, domestic fowl, insects, earthworms, grass and berries. When the hunting is good, a red fox may often stockpile or cache its dead prey for another day, tucking the treasure neatly beneath snow or in a small hole that it covers with dry grass, leaves, dirt or other debris.

The red fox is often the first fox that comes to mind when someone mentions the word "fox." Their reputation of being sly, cunning and elusive definitely precedes them; a notoriety stemming from hundreds of years of European fables, embellished fox hunter stories, and attempts by farmers to make their chicken coops fox-proof.

Red foxes are the most widespread species of fox around the globe. They range throughout most of North America, Europe and Asia, in parts of North Africa and across most of Australia where they were introduced in the 19th century. Highly adaptable, they occur in many different habitats including "edges" where forests abut meadows, riparian zones and bushlands. They are common in Utah where they primarily reside in semi-desert and scrub communities but also occur in heavily timbered areas, suburban settings and cities as well.

The red fox is one of only a few carnivores that have expanded their range and increased in number since European settlement. It is now the most ubiquitous North American fox. Before settlement, only gray foxes were common in the dense forests of the East, and colonists were unaware that the red fox was a species native to the continent. Among the things the Europeans coming to America brought with them was a traditional love of fox hunting. Upon attempting to hunt the gray fox, houndsmen soon learned that gray foxes, which failed to put up as good a chase as the red fox of their homeland, were a poor substitute for pursuing their sport. To remedy the situation, dedicated fox hunters began to import their own foxes. European red foxes were first released into areas of Maryland, Virginia, Long Island and New Jersey around 1650. Later it was discovered that native red foxes not only existed but that they had moved eastward as forests were cleared for homesteads and farms, creating habitat preferred by red foxes. European and American red foxes (now recognized as the same species) interbred and spread throughout the east. Because of their opportunistic nature, they also expanded their range across much of the west as well.

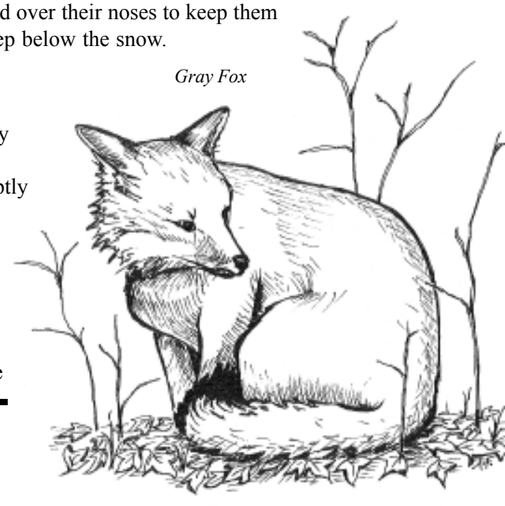
At about 12 to 14 pounds, the red fox is the largest of the foxes in North America. Females, called vixens, are smaller than the males, known as dogs. The red fox is also one of the flashiest members of the wild canid clan, famous indeed for its beautiful and luxurious fiery red coat of fur. Contrasting with this "red" coat is snowy white fur below, rich black "stockings" for each of the limbs, a glossy black nose at the end of its snout and a long bushy tail tipped always in white.

But not all red foxes are red. "Red" ones of course vary, ranging from rusty orange to tawny gold. Melanistic or black red foxes are black. "Silver foxes" are black red foxes that come sprinkled liberally with white-tipped guard hairs. And "cross foxes" are ones that bear a cross formed by brown guard hairs that run from their head down the center of their back and across their shoulders. No matter which color phase of red fox though, all have a white-tipped tail that sets them apart.

Other than when raising their young, red foxes seldom seek shelter in holes or dens. Even during the snowy days of winter, they just sleep in the open with their fancy well-insulated tails curled over their noses to keep them warm. And as each evening approaches, they set out in search of prey deep below the snow.

Gray Fox - *Urocyon cinereoargenteus*

Gray Fox



The gray fox, nicknamed the "tree fox," is the only wild canid that regularly climbs trees. It can scurry up a tree faster than most people can recite the string of Latin syllables that comprise its scientific name—a name which aptly describes this fox. *Urocyon* is the Greek word for "tailed dog," and *cinereoargenteus* means "ash-silver" in Latin. As its common name reflects as well, the coat of the gray fox is made up of a "salt and pepper" grizzled gray fur, the result of white, gray and black banding on individual guard hairs of the coat. The gray fox though is not completely gray; portions of its legs, tail, neck and sides are a brilliant burnt orange, and its undersides are buff to white in color. A dark black stripe running along the

midline of its long bushy tail culminates in a black tip, a feature which makes this handsome fox distinctive from others. Having relatively shorter legs, it is slightly smaller than its cousin the red fox, measuring between 32 and 45 inches and weighing about 9 to 11 pounds.

A "southerner," the gray fox has its origins in the Neotropics. Today, with the exception of parts of the Northwest and a few plains states, the gray fox is widely distributed, ranging coast to coast in the United States, and from the southern edge of Canada south to northern Venezuela and Colombia. In Utah, they are native to the deciduous woodlands and shrublands of central and southern Utah, preferring rugged broken terrain with brushy vegetation.

As a descendent of warmer regions, the gray fox has only a single layer of coarse fur. It also tends to make use of dens for shelter on a regular basis, even when not raising its young. Dens are located in small caves, hollows in logs or trees, beneath boulders or within abandoned burrows of other animals. They are often situated on east, southeast and south-facing slopes to take advantage of the warming effects of the sun, and are frequently lined with shredded bark or leaves.

The gray fox's skill of climbing trees is facilitated by its significantly longer, sharper and semi-retractable curved claws. Trees are used for foraging, resting places and refuges from danger. It climbs in a scrambling motion like a cat, grasping the trunk of the tree with its forefeet and pushing upward with its hind feet. It is also able to leap from branch to branch in pursuit of prey, and can ambush its victims from above. They are secretive in nature, and might be resting quietly in a hollow of a tree, right above you, as you hike a path through the woods.

Kit Fox - *Vulpes macrotis*

The first thing that one notices about a kit fox is its miniature size. Indeed, the kit fox, as its name suggests, is the smallest fox in North America. The average adult kit fox tips the scale at a petite five pounds. Standing erect, their shoulders barely reach a foot above the ground. The second thing that is noticed about a kit fox is the enormity of its extra large ears. Fittingly, the kit fox's species name, *macrotis* means "large ears."

Kit foxes are denizens of the cold dry deserts of the Southwest. In Utah, they reside throughout the sagebrush and shad scale covered expanses of the Great Basin and within desert regions of the southwestern and southeastern parts of the state.

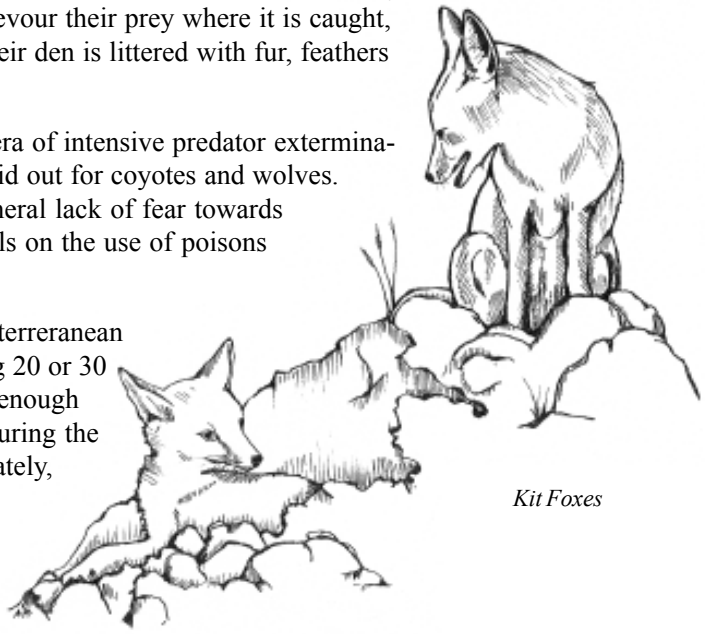
The tiny kit fox dresses to match the desert, donning a furry suit of tan, light gray or soft shade of ocher. Cream-colored fur below, splashes of ebony on both sides of its muzzle and a spot of black at the end of its long bushy tail complete its attire.

The fur of the kit fox not only helps it meld with its sandy abode, but also insulates it from the cold of the desert night and intense heat of the day. Fur lines its huge ears as well, shielding them from blowing sand. And fur in between its toes lends extra traction as it dashes across the sand.

Kit foxes hunt at night, stalking grasshoppers, horned lizards, ground-nesting birds, rabbits and kangaroo rats. Carrion, grasses and fruits are eaten too. All the water they need to survive comes from the fare they consume. Unless they are very hungry, kit foxes usually do not devour their prey where it is caught, but carry it home to eat it there. As a result, the ground around their den is littered with fur, feathers and small bones.

Kit foxes were once more abundant across the West. During the era of intensive predator extermination though, kit foxes became innocent victims of poisoned bait laid out for coyotes and wolves. They were often the first to feed on poisoned carcasses, and a general lack of fear towards people made them easy targets for traps and guns. Tighter controls on the use of poisons have luckily afforded them a come-back to some extent.

Kit foxes are tied very closely to their dens year-round. Their subterreranean homes can be quite elaborate, with a labyrinth of tunnels extending 20 or 30 feet through the sandy soil, and a number of entrances/exits large enough for them, but not for potential predators such as coyotes. Since during the day kit foxes rarely venture from their dens, few people, unfortunately, ever get the chance to see this delicate little desert dwelling fox.



Kit Foxes

Resources

You'll Howl about these Resources!

Call Project WILD at (801) 538-4719

Wild Canid Resources:

Wild Canid Crate - A new educational activity and resource materials trunk soon available for check-out. Includes hides, skulls, track replicas, puppets, books, activity guides, background information and articles, posters, videos and more.

Kit Fox - An excellent 4-page publication in the Utah Division of Wildlife Resource's Wildlife Notebook Series featuring the kit fox.

Who is Coyote - Interesting and informative publication featuring coyotes. Part of the Colorado Division of Wildlife's "Colorado's Wildlife Company" series.

Mexican Gray Wolf Poster - An exceptional poster featuring the Mexican gray wolf produced by New Mexico Project WILD.

Wolf Pac - A wonderful comprehensive set of wolf education materials and activity guides.

Wolves; Wild Dogs - Two issues within the popular ZooBooks series. $2 each. Make check out to UDWR and send along with request to Project WILD, PO Box 146301, Salt Lake City, UT 84114-6301.

National Wolf Awareness - Excellent colorful and educational kids newspaper/activity page for National Wolf Awareness Week, 2000.

Red Fox; Gray Wolf - Copies of activity pages focusing on these two species of wild canids from the excellent book, The Kids' Wildlife Book by Warner Shedd, Williamson Publishing, 1994.

Wild Canid Internet Sites:

The Boomer Wolf Page - Designed for kids, this site provides a rich supply of factual, fictional and fun-and-games educational wolf information. **www.boomerwolf.com** Check out the Destination "Wolf Language" to supplement the activity "Wordless Wolf Talk" on pages 8-9 of this newsletter.

Wolf Discovery Curriculum - Outstanding online/downloadable educator's activity guide featuring wolves, created by Defenders of Wildlife. **www.kidsplanet.org/tt/wolfcurriculum.html** See also: **www.defenders.org/wildlife/new/wolves.html**

International Wolf Center - The center offers educational resources, photographs, wolf data and management information. A great reference site for students and teachers. **www.wolf.org**

Wolves Action Pack - Comprehensive online/downloadable educator's activity guide produced by the National Wildlife Federation. **www.nwf.org/atracks/wolves/wolfstuff.html**

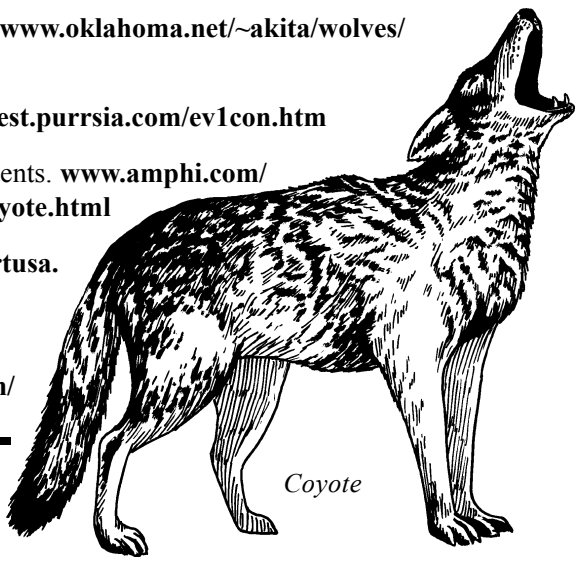
The Wolf Pack **Picture Gallerie** - A wonderful collection of wolf photos. **www.oklahoma.net/~akita/wolves/wolves.htm**

Liska's Encyc*Vulpedia* - A great fox information reference. **mynarskiforest.purrsia.com/ev1con.htm**

Coyote Activity Page - A good interactive web coyote activity site for students. **www.amphi.com/~tlcf/schaefer/web2/act1.htm** See also: **ngp.ngpc.state.ne.us/wildlife/coyote.html**

Desert USA - An excellent fun site to learn more about coyotes.**www.desertusa.com/june96/du_cycot.html**

Coyote Stories - A collection of great coyote fables. **home.earthlink.net/~nativelit/coyote** For a collection of fun fox fables see: **vulpes.org/foxden/index.htm**



Coyote

Wordless Wolf Talk *Utah Animals*

Objectives: Students will: understand the importance of wolf communication within a wolf pack; explore various wolf body postures and facial expressions, and interpret their meanings; and compare wolf "body language" to that of humans.

Background: Wolves live in family units called packs. Within packs, harmony and order is kept through a well structured dominance hierarchy where all pack members have a certain position or status. The alpha male and female, almost always the breeding pair in the pack, are in charge and have ultimate authority just as parents in human families do.

Since wolves cannot "talk" with each other like people can, they must use other ways to convey information. Instead, wolves use scents, vocalizations such as howls, whimpers and growls, and body postures and facial expressions to tell others in the pack what they are thinking.

This activity focuses on how wolves use body postures and facial expressions to communicate feelings such as fear, aggression, confidence and intent to play.

Procedure:

Introduce the concept of nonverbal communication in people. Have students brainstorm a list of how people might express various feelings such as boredom, anger, happiness, worry, approval, displeasure or fear without using words. Discuss what meanings or messages might be conveyed by certain gestures, body postures or facial expressions used by people.

Discuss with your students how wolves also use nonverbal communication to "talk" to other wolves in the pack. If they have seen a dog jump up to greet its owner, bark at a stranger or roll over when another dog approaches, then they already know something about how wolves communicate. Dogs, indeed, inherited most of their language from their ancestors, the wolves.

Review some of the common nonverbal wolf displays described below. Afterwards, have students match the drawings of wolves showing various body postures and facial expressions on the next page to the statements being made.

1) **Intent to Play:** When a wolf wants to play, it bows down by lowering its chest to the ground, extending its forelegs while keeping its hindquarters up. It cocks its ears forward, grins and wags its tail high in the air.

2) **Greeting Posture:** A lower ranking wolf will greet a more dominant wolf by lowering its body profile and tail, and flattening its ears. It looks aside and grins tensely with no bared teeth while it wags its tail.

3) **Dominance:** The dominant wolf of the pack carries its tail high and appears in control. It holds its head high with its ears forward and its mouth relaxed. It looks directly at the other wolves.

4) **Submission:** When a more dominant wolf must be appeased, a submissive wolf will roll on its back and show its belly. It keeps its mouth closed and its ears back.

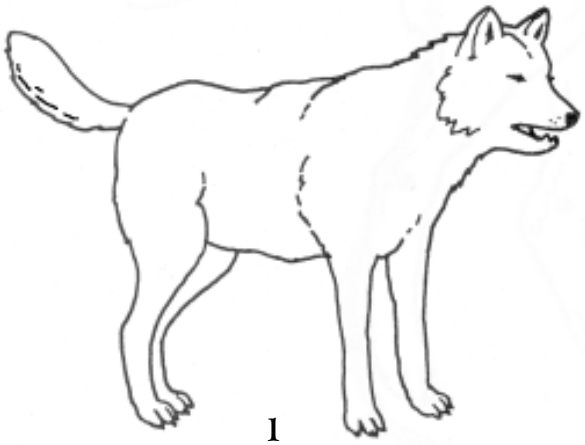
5) **Aggression/Anger:** A more dominant wolf will hold its ears erect, bare its teeth and growl at a lower ranking wolf that gets out of line.

Extension: In groups, have students pretend they are like wolves and cannot talk. Have them use only nonverbal means of communication for part of the day. Afterwards discuss what happened.

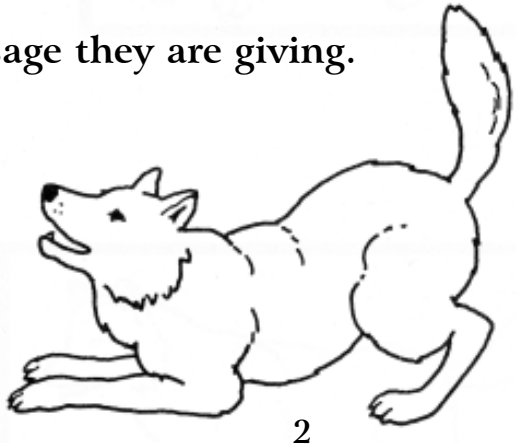
Adapted with permission from: "Wolf Talk" in Wolves Action Pack, National Wildlife Federation, 1999.

Who's saying what?

Match each of the wolves with the message they are giving.



1



2

Messages

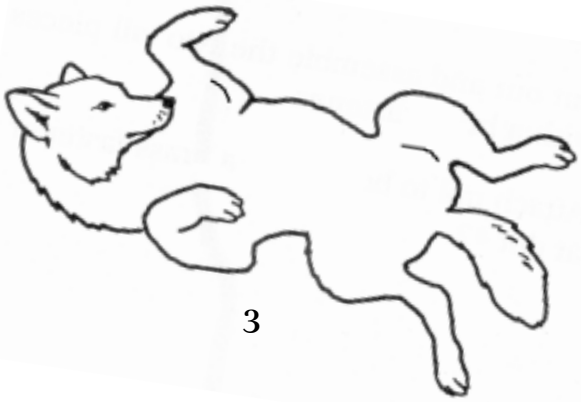
_____ Hello, You are My Leader.

_____ Hey, Let's Play!

_____ I won't Fight. I'll Obey.

_____ I am in Charge. I'm the Leader.

_____ Stop That! Behave.



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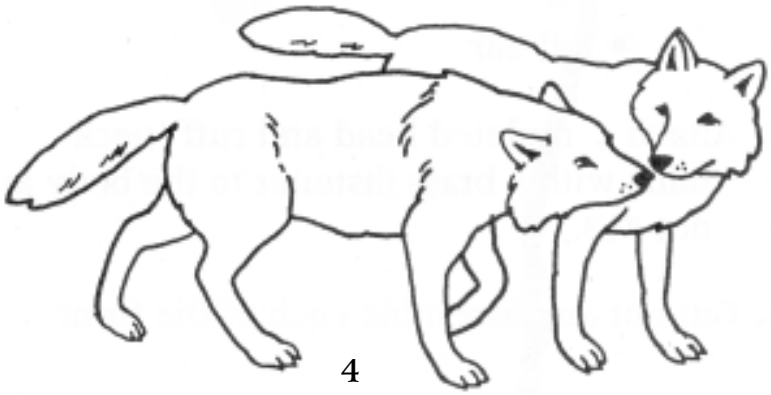

4

5

Correct Order: 4; 2; 3; 5; 1

Issue Investigation

Predators and People: Moving from Conflict to Coexistence

As predators, wolves, coyotes and foxes are among a set of mammals that due to their nature of killing other animals to survive, have often been at odds with people. Ironically, of the thousands of animals with whom people share the planet, mankind's closest is the dog, the domesticated descendent of predatory wild canid ancestors that chose to remain wild and free instead of coming in from the cold. Still, anti-predator sentiment has reigned strong and fierce for centuries. Only of late have increased awareness and ecological understanding begun to cast wolves, coyotes and foxes in a different light. The following summarizes the history of events that have shaped populations and people's perceptions of the wild canids that exist in North America today.

Wolves: Remember the three little pigs — those cute little fellows that were hassled by the viscous wolf who tried and tried to blow down their houses so he could have pork for dinner? And remember Little Red Riding Hood — the sweet little red-caped girl who just wanted to visit her dear sick grandmother, but instead ran into the mean wolf that tried to eat her too? In both stories, and many others, the wolf was always the bad guy. The story "Little Red Riding Hood" was written in 1697 by a Frenchman named Charles Perrault. The wolf though, had been given its bad name much earlier.

At the dawn of prehistory, human hunter-gathers may have developed a spiritual kinship with wolves, who like themselves were highly social beings that survived by the hunt. At some point, humans even literally made friends with wolves, and gave the animals a home in their camp. But then came a change. Humanity discovered the craft of animal husbandry. As the hunter's spear transformed into a shepard's staff, the wolf was transformed into an enemy, and thus victim, of man.

Centuries later, Europeans came to America. They brought with them their long established hatred and fear of wolves. Persecution of the wolf continued in the New World as it had for ages in Europe. Many wolves were often inhumanely and gruesomely tortured for no reason other than hatred and fear. Later, through government eradication programs to protect livestock, millions of wolves were poisoned, shot and trapped across the continent.

By the 1960s, wolf populations in the lower 48 states were reduced 99.8 percent to only 450 animals. Today, many people's bad perceptions of wolves are fading, and the important role that predators such as wolves play in natural environments is being recognized. Efforts by the U.S. Fish and Wildlife Service (USFWS) to restore wolves to key parts of their historic range under the Endangered Species Act for the past two and a half decades have had ups and downs, but are starting to show success. In 2000, the USFWS submitted a petition to reclassify the gray wolf from "Endangered" to "Threatened" status in parts of the country, and completely remove the species from the endangered species list in other areas.

Much of the credit for success of wolf restoration is due to a leading national conservation organization known as "Defenders of Wildlife." Defenders managed to offset much opposition to wolf reintroduction from the livestock industry by creating a Wolf Compensation Trust in 1987 to reimburse ranchers in recovery areas for verified losses caused by wolves. The trust is financed by private donations from people in support of wolf recovery. As of September 2000, the trust has compensated 130 ranchers, $138,474.77 for 538 depredated livestock. The number of animals lost in those 14 years equates to less that one half of one percent of the total number of livestock lost due to other causes such as inclement weather.

As wolves knock on the door of Utah, the Utah Wildlife Board has discussed holding a series of statewide Regional Advisory Council or similar type meetings to gather public input regarding wolf management. All Utahns can influence future wolf management decisions by voicing their opinion at such meetings. People in favor of wolves can also support the efforts of wolf conservation organizations.

Coyotes: The story of the coyote starts pretty much the same as that of the wolf (but ends quite differently). Long ago, coyotes learned that farms and ranches meant livestock – easy to kill and good tasting prey. Sheep, as reflected in the words on a rurally popular bumper sticker, "Eat Mutton: A Million Coyotes Can't be Wrong," have been the preferred livestock choice of coyotes. The coyote's taste for mutton was what marked it for persecution. In 1825, the state of Missouri became the first to put a price on the head of the coyote. Other states soon followed suit. Bounty

systems were fraught with corruption and abuse. Some trappers routinely released female coyotes so they would produce more coyotes.

Others raised pups they had taken from the wild to adulthood so they could collect a higher bounty. Often coyote pelts "migrated" to states paying the highest bounty, and many could be bountied more than once, especially if they had gotten too ripe for inspectors to examine closely. Sometimes even the scalp of the farmyard dog that had died secured a payment.

In the 1930s, the Federal government authorized and created the Animal Damage Control (ADC) program for the purpose of controlling coyotes, and the elimination of the nemesis coyote became an all out war. A plethora of poisons, including arsenic, cyanide, strychnine, thallium sulfate and Compound 1080, flooded the land, killing not only coyotes, but other wild canids, bobcats, hawks, eagles and many other carnivores. Leg-hold traps, explosive devices called "coyote getters," shotguns and poisoned carcasses all took their toll, killing over 20 million coyotes over the years. ADC, which operates under the U.S. Department of Agriculture, and which is now charged to control all problem wildlife, recently changed its name to Wildlife Services.

And yet, the coyote still prevails! And so the war continues on — at a cost of over 20 million dollars of public funds annually to kill about 80,000 coyotes on both public and private lands across the West each year. Many people today admire coyotes though. Utah's school children picked "Copper" the coyote as one of the state's 2001 Winter Olympic mascots and numerous tourists buy cute little pink coyotes dressed up in neckerchiefs from gift shops across the Southwest. Coyote control is also being undertaken in some areas to help in the recovery of endangered black-footed ferrets.

Coyote numbers still remain high (they are very adaptable and wolf competition has been eliminated), and despite coyote control, sheep ranchers still suffer losses. Ironically though, since coyotes in Utah are classified as varmints and are not managed by the Utah Division of Wildlife Resources (UDWR) but instead by the state Department of Agriculture, UDWR does not compensate ranchers for coyote caused losses as it does for losses caused by other predators such as bears and mountain lions that are managed by UDWR.

Changing public awareness and attitudes regarding coyote control has led Wildlife Services to start spending a good deal of its budget on researching non-lethal predator control, and they now suggest that ranchers implement non-lethal control measures like fencing, guard dogs and night-time enclosures whenever possible. They are also advocating more direct controls such as trapping and using livestock protection collars that target specific animals that are killing sheep. Implementation of these measures however is not required. In the end, the highly adaptable coyote is probably here to stay.

Foxes: In the past, foxes, especially kit and swift foxes, suffered significant population declines as a result of feeding on poisoned carcasses intended to control wolves and coyotes. Some populations unfortunately have not rebounded. Some foxes though, especially red foxes, are often the intended target of predator control programs. Foxes have needed to be controlled when they have posed serious threats to certain species of ground-nesting birds. For example, non-native red foxes are being trapped along beaches in California to help protect endangered snowy plovers.

Foxes, of course, have been cursed and killed repeatedly in retribution for the havoc they wreaked with chickens and other domesticated fowl. They seem to have survived despite such revenge. Today in most states, foxes are managed as furbearers, and their trapping is controlled by strict harvest regulations to sustain populations.

People have often seen predators like wolves, coyotes and foxes as either villains or saints, evil or beloved. They are neither though. Instead, they are simply creatures that eat other animals to survive. They are also fascinating, intelligent and especially interesting animals to us because of their resemblance to our animal companion, the dog. But they remain neither good nor bad, right nor wrong, but merely components of balanced and healthy ecosystems that provide benefits to all.

To learn more about attitudes and values that people have towards wild canids, have students conduct the Project WILD activity, "Changing Attitudes." Have them create a survey to assess and compare the level of knowledge and differing perceptions various people have about wolves, coyotes and foxes. The Western Wildlife Conservancy (801) 575-7101 also gives school programs on predatory mammals native to Utah, including wolves, coyotes and foxes.

project WILD

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Growing WILD is written by Diana Vos. Edited by Vicki Unander. Illustrators: Clark Bronson, Anne Ferguson and Zachery Zdinak. Artwork may not be reprinted.

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Student Artists Wanted!

for

The 2001 Federal Junior Duck Stamp Conservation and Design Contest

Sponsored jointly in Utah by the Ogden Nature Center and Project WILD, this waterfowl art contest is open to any student in grades K-12. Entries submitted to Project WILD by the **March 15, 2001** deadline will be judged against others in the artist's age group (K-3, 4-6, 7-9 and 10-12) with first, second, third place and honorable mention ribbons being awarded in each category. A Best of Show winner will also be selected to compete nationally against Best of Show winners from other states for scholarships and prizes.

For additional information or for entry forms, contact Project WILD at (801) 538-4719 or the Ogden Nature Center at (801) 621-7595.